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Abstract

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PI Title:

Project Title: A KNOWLEDGE BASED SYSTEM FOR CONTINENCE

Abstract: Urinary continence problems are a health concern for older women and the prevalence rate of urinary incontinence in this group is estimated at 38 percent. The study of urinary incontinence has resulted in behavioral management strategies that can reduce urinary incontinence symptoms significantly. Information about urinary incontinence and behavioral management strategies has not been communicated effectively to older women. Thus, there is a need to communicate what is known about urinary incontinence and to promote risk-free behavioral management strategies for women with continence problems. A promising new approach is computer- based health promotion in the form of a knowledge-based system, which can provide individualized information in a convenient manner. This study proposes to develop and test the effectiveness of a knowledge-based system in communicating information on continence health promotion to women with symptoms of involuntary urine loss, urinary frequency, urinary urgency, or nocturia. To accomplish this, the candidate will pursue a career development program consisting of training in the design, development, construction, and evaluation of knowledge-based systems. The training will be applied to research in three study phases: Phase 1; Knowledge-Based System Design and Development will construct a knowledge-based system to provide continence promotion information and advice tailored to individual women's needs and risks. Phase 2; Knowledge-Based System Construction, Pilot Study and Revision will complete usability and validity testing, and conduct a pilot study to test procedures and instruments with 24 older ambulatory women. Revisions will be made based on pilot study findings. Phase 3: Test of the Knowledge-Based System for Continence Health Promotion in Older, Ambulatory Women will test the effectiveness of the continence knowledge-based system comparing ambulatory women ($n=165$), aged 55

years or older, randomized to a treatment group or to a wait-list control group. The groups will be compared on symptom distress, frequency of voiding, number of episodes of urgency, voiding episodes per night, and episodes of involuntary urine loss, and in improving quality of life. Repeated measures ANCOVA will be conducted for all outcome variables and exploratory descriptive analysis will be performed on the process variables to determine whether or not the women actually carried out the recommended strategies.

Thesaurus Terms:
computer system design /evaluation, female, health education, information system, urinary incontinence
computer assisted instruction, geriatric nursing, quality of life
clinical research, human middle age (35-64), human old age (65+), human subject, personal log /diary, women's health

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